and age of the earth. Part II describes exogenic processes, and Part III, endogenic processes. Chapters 1-3 and 11-17 were written by G.P. Gorshkov, Doctor of Geological and Mineralogical Sciences, and Chapters 4-10 and 18 by A.F. Yakushova, Docent with the Division of Dynamic Geology of the Moscow State University and a Candidate of Geological and Mineralogical Sciences. The authors express their gratitude to Academician D.I. Shcherbakov and M.M. Charygin of the Department of Geology of the Leningrad State University imeni A.A. Zhdanov for their assistance in reviewing and editing their book. There are 246 diagrams, 36 tables, and 185 Soviet references.

TABLE OF CONTENTS:

GORSHKOV, G.P.

SUBJECT: USSR/Geology 5-2-17/35

AUTHOR: None

TITLE: On the Activities of the Geographic Section of the Moskva Society of Investigators of Nature (O deyatel'nosti geograficheskoy sektsii Moskovskogo obshchestva ispytateley prirody)

PERIODICAL: Byulleten' Moskovskogo Obshchestva Ispytateley Prirody, Otdel Geologicheskiy, 1957, # 2, pp 149-151 (USSR)

ABSTRACT: During the period from December 1956 to January 1957, the following reports were delivered to the Geographical Section of the Society:

"On the Problem of Investigation the Energy of Relief" - by N.P. Matveyev;
"Landslides and Erosion Process" - by S.S. Buts'ko and V.A. Federovskiy;
"Seismic Tectonics and Neotectonics of China" by G.P. Gorshkov, and "New Data on Modern Volcanism in Eastern Tuva" - by M.G. Gresval'd.

ASSOCIATION: Moskva Society of Investigators of Nature.

PRESENTED BY:

SUBMITTED: No date indicated

AVAILABLE: At the Library of Congress.

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3(1) PHASE I BOOK EXPLOITATION SOV/2910

Gorshkov, Georgiy Petrovich, Professor, Doctor of Geological and Mineralogical Sciences

Stroyeniye zemnogo shara (Structure of the Earth) Moscow, Gostekhizdat, 1958. 47 p. (Series: Nauchno-prosvetitel'naya biblioteka, no. 18) 100,000 copies printed.

Ed.: D.A. Katrenko; Tech. Ed.: Ye. A. Yermakova.

PURPOSE: This booklet is intended for the general reader interested in earth science.

COVERAGE: This is a popular discussion of the geological structure and physical parameters of the earth. The author discusses various theories on the origin and development of the earth. He describes the earth's shape, internal structure and chemical composition, and discusses the principles and methods used in determining them. He also treats various forces and phenomena such as gravity, magnetism, isostasy, the radioactive decay of elements,

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etc. No references are given.

TABLE OF CONTENTS:

Structure of the Earth

SOV/2910

8. Structure and Development of the Earth's Crust 39

9. Sources of Energy of Tectonic Movements 44

AVAILABLE: Library of Congress (QE501. G67)

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MM/bg
12-31-59

Problems in Engineering Seismology, Nr 1) SOV/2458

TABLE OF CONTENTS:

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GORSKOV, G.P. [Gorshkov, G.P.]

On seismic division into districts. Geofiz kozl 7 no.3/4:195-198 '58.

SOV/ 49-58-11-18/18

AUTHOR: Gorshkov, G. P.

TITLE: The Third Symposium on the Geophysics of the Carpathian Basin (Tretiy simpozium po problemam geofiziki Karpatskogo basseyna)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Geofizicheskaya, 1958, Nr 11, pp 1421-1424 (USSR)

ABSTRACT: The Third International Symposium on the Geophysics of the Carpathian Basin was held in Budapest on September 26-28, 1957. Apart from Hungarian scientists, the following were represented: East Germany were represented by O. Meisser, H. Bremer, R. Rezler, K. Rote, K. Schlessler, Hertwig, Puziger-Reinhardt; Rumania: L. Konstantinescu, S. Stefanescu; USSR: G. P. Gorshkov. The following papers were read: 1) On the seismicity of Hungary, D. Csomov and S. Kiss. It describes how the seismic chart of Hungary was prepared from the various data collected by A. Retli for the period 455-1918 and by the State Seismic Institute for the period 1929-1955. The mean frequency of earthquakes was found to be 11

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The Third Symposium on the Geophysics of the Carpathian Basin

per year, which considerably increased in the years of strong earthquakes (1908, 1909, 1911, 1925, 1927 and 1956). The depth of focus varied from 1 to 20 km, the mean being 4 to 7 km. Therefore the cause of the earthquakes could be located in the crust. The intensity M was calculated from the formula $M = 0,3 + 0,6 J_0$, where J_0 -- the force of shock. The intensity M was divided into groups for which the number n of earthquakes was found from the formula $\log n = 4,17 - 0,65 M$. The energy E in ergs was determined for each group individually (E^*) and as a mean for the last 75 years (see Table on p 1421).
2) Deformation of the earth's crust caused by the earthquake in Dunakharasti on January 12, 1956. L. Benderfy. Investigations showed that the height of the deformations caused by the above earthquake was characterised by the increased height of the ground wave from 1 - 2 m to 6 - 7 m (the latter near the epicentre), while the length decreased with distance. After the earthquake height a further increase of 4 - 6 mm of height was observed. The character of the deformation showed a system of folds asscciated with sliding. The direction of one of the deformation systems was spread along the Hungarian Central Mountains.

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3) Geothermic conditions of the Hungarian Plain. L. Stegena.

The Third Symposium on the Geophysics of the Carpathian Basin

The data on the water temperature of 431 Hungarian artesian wells were published in 1919. The author investigated the data and discovered that down to 500 m the average geothermic rate is equal to 24 m. The thermic flow can be defined in the range 0.72×10^{-6} to 1.43×10^{-6} cal. $cm^{-2} sec^{-1}$, the probable value being -1.08×10^{-6}. The crystal foundation could be investigated, which actually was done by Kl. Schlössler (East Germany) who described his work in this field in the next paper. 4), Geophysical thermal flow. 5) Tectonic synthesis of the Carpathian Mountains. T. Czalai, Hungary. The author described the tectonic history of ore mountains and the N. W. Carpathians and Dinar Mountains. The gravitation maximum was located by the author in the S.E. of this area. The Sudeten area, together with the crystallic foundation of the N.W. Carpathians, was described by the author as the geoanticlinal of mezozoic origin. 6) Problem of the old massif of Transylvania. V. Scheffer, Hungary. By the comparison of a chart of the magnetic anomalies of Transylvania with the chart of gravitational isostatic anomalies of

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the S.E. Carpathians and the chart of isogons, it was possible to draw some conclusions such as the presence of a magnetic mass buried under the neogenic basin of Transylvania.

7) Geophysical determination of the deposits of mineral resources in the Carpathian basin, D. Czenas, Hungary. Most of the minerals in Hungary are deposited on the surface of the foundation. Therefore the survey is confined mainly to the investigation of this. Oil deposits were found by the application of gravimetric and seismic methods. Coal seams were investigated by means of geophysical methods while layers of bauxite were found by employing geo-electric, gravimetric, geomagnetic and seismic methods. In the case of iron ore, the best method was found to be the seismic one.

8) On dividing into seismic regions, G. P. Gorshkov, USSR. The author described the methods of determination of seismic regions based on their activity. In order to plot a seismic chart, both the seismostatistics and seismo-geology could be applied.

During this symposium a special exhibition was opened, showing the apparatus and appliances employed for the determination of earthquakes, soil resistance, telluride apparatus for surveying of oil deposits, the apparatus for the determination of γ-radiation in deep wells and various other measuring instruments of high

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precision. The scientists were introduced to the Geophysical Institute of the university. The Institute is composed of various departments: seismological (under B. Simon), seismosurvey (K. Posgay), gravitational (I. Renner), geomagnetic (B. I. Haaz), geo-electrical (K. Sebestyen), geochemical and geothermic survey (L. Stegena), geophysical observations (Sz. Oszelaczky). The director of the Institute was Prof. Tibor Dombai, his deputy, Prof. Janos Csolkas. The Institute has a geomagnetic laboratory in Tihan (headed by G. Barta), a geophysical laboratory in Shopron (T. Hornocha) and three seismic stations at Budapest, Seged and Baia. There is 1 table.

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USCOMM-DC-60,565

BATYUSHKOVA, Irina Vasil'yevna; GORSHKOV, G.P., prof., red.; KALININ, V.A., red.izd-va; GUSEVA, I.N., tekhn.red.

[Concepts of the causes of earthquakes in works of Russian scientists] Predstavleniia o prichinakh zemletriasenii v rabotakh otechestvennykh uchenykh. Moskva, Izd-va Akad. nauk SSSR, 1959. 77 p. (MIRA 12:8)
(Seismology)

PHASE I BOOK EXPLOITATION SOV/4066

Gorshkov, G. P.

Voprosy seysmotektoniki i seysmicheskoye rayonirovaniye territorii Kitayskoy Narodnoy Respubliki (Seismotectonic Problems in the Territory of the Chinese People's Republic and Its Division Into Seismic Regions) Moscow, Izd-vo Akademii nauk SSSR, 1960. 53 p. (Series: Akademiya nauk SSSR. Sovet po seysmologii, Byulleten', no. 7) Errata slip inserted. 1,200 copies printed.

Resp. Ed.: S. V. Medvedev, Doctor of Technical Sciences; Ed. of Publishing House: A. K. Parchevskiy; Tech. Ed.: S. G. Markovich.

PURPOSE: This publication is intended for seismologists and geologists.

COVERAGE: The publication presents the results of a study of seismicity on the territory of China, conducted by the Institute of Geophysics of the Academy of Sciences of the Chinese People's Republic during 1955-56, for the purpose of dividing the country into seismic regions. Such seismic "regionalization" provides a system of forecasting the probable location and magnitude of future earthquakes. The Institute was aided in this work by Soviet specialists, among them S. V. Medvedev, Doctor of Technical Sciences (problems of

Chang Yu-ling, Ch'en Meng-hsiun, Yüan Fu-li, Yü Po-lien, and Yang Chung-chien. The publication contains 137 bibliographic references: 62 Chinese, 22 Soviet, 2 Italian, 10 French, 34 English, 6 German, and 1 Japanese.

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JA/rn/ec
8-18-60

Papers submitted for the 10th Pacific Science Congress, Honolulu, Hawaii 21 Aug-6 Sep 1961.

BAZHIN, A., The Leningrad Forestry Engineering Academy imeni S. M. Korov. Invited to give a paper in the Symposium on Forest Inventories (Section V.B.1).

DZERDZEYEVSKIY, B. L., Institute of Geography, Academy of Sciences USSR. Invited to give a paper on meteorology in The Matthew Fontaine Maury Memorial Symposium for Antarctic Research (Section VII.D.1).

GERSHENZON, S. M., Institute of Zoology, Academy of Sciences USSR. Invited to give paper in the Symposium on Crop Pests and Biological Control (Section III.D.1).

GILYAROV, Merkuriy S., Institute of Animal Morphology imeni A. N. Severtsov. Invited to give a paper in the Bering Arc Relationships session in the Symposium on Pacific Basin Biogeography (Section III.A.8.a).

GORSHKOV, Georgiy P., Volcanological Laboratory, Academy of Sciences USSR. Invited to participate in discussions of the Symposium on Volcanism and Plutonism in Relation to Types of Crustal Deformation. (Section VII.C.3).

KOBLENTS-MISHKE, Olga I., Institute of Oceanology. Invited to give paper in Symposium on Algae and their Productivity in the Pacific Basin Region (Section III.A.4).

KORT, V. G., Director, Institute of Oceanology. Invited to give paper in The Matthew Fontaine Maury Memorial Symposium for Antarctic Research (Section VII.D.1)

KUZMINSKAYA, Irina P., Institute of Physics of the Earth imeni O. Yu Schmidt. Invited to give paper in Symposium on The Earth's Crust in the Pacific Basin (Section VII.C.2)

KUZNETSOV, A. I., Far Eastern Affiliate imeni V. L. Komarov, Academy of Sciences USSR. Invited to give paper in session on Bering Arc Relationships in Symposium on Pacific Basin Biogeography (Section VI.E.3.a)

MAGNITSKIY, Vladimir A., Institute of Geophysics, Academy of Sciences USSR. Invited to give paper in Contributed Papers Session of Division of Solid Earth Sciences (Section VII.C)

MAKSIMOV, Igor V., Lenin's Place 3, Apt. 18, Leningrad. Invited to participate in Symposium on Tsunamis (Section VII.C)

NAUMOV, Sergey P., Prof., Pedagogical Institute imeni V. I. Lenin, Moscow. Invited to give paper in session on Bering Arc Relationships in Symposium on Pacific Basin Biogeography (Section VI.E.3.a)

NELEPO, B. A., Dr., Faculty of Physics, Moscow State Universtiy. Invited to give paper in Symposium on Radioactive Tracers in Oceanography (Section VII.B)

NESTEROV, Valentin G., Chair of Forestry, The Agricultural Academy imeni K. A. Timiryazev. Invited to give paper in Symposium on Forest Fire Research (Section V.B.3)

RASS, Teodor S., Institute of Oceanology. Invited to present a paper in the Contributed Papers Session of the Division of Marine Biology and Fisheries (Section III.C)

SEMENOVA-TYAN-SHANSKAYA, A., Institute of Botany imeni V. L. Komarov. Invited to give paper in the session of Bering Arc Relationships of Symposium on Pacific Basin Biogeography (Section VI.E.3.a)

SOCHAVA, Viktor, Institute of Botany imeni V. L. Komarov. Invited to give paper in the session of Bering Arc Relationships of Symposium on Pacific Basin Biogeography (Section VI.E.3)

SHVETSOVA, O. I., All-Union Institute of Plant Protection. Invited to give paper in Symposium on Crop Pests and Biological Control (Section I.A.10)

SHUMSKIY, P. A., Institute of Permafrost Studies. Invited to give paper in The Matthew Fontaine Maury Symposium for Antarctic Research (Section VII.D.1)

STEPANYAN, Boris, Institute of Zoology. Invited to give paper in the session of Bering Arc Relationships of Symposium on Pacific Basin Biogeography (Section VI.E.3.a)

TIKHOMIROV, Boris A., Institute of Botany imeni V. L. Komarov. Invited to give paper in the session of Bering Arc Relationships of Symposium on Pacific Basin Biogeography (Section VI.E.3.a)

TOLMACHEV, A. I., Institute of Botany imeni V. L. Komarov. Invited to give paper in the session on Bering Arc Relationships of Symposium on Pacific Basin Biogeography (Section VI.E.3.a)

YATSENKO-KHMELEVSKIY, Andrey A., Department of Plant Anatomy and Plant Physiology, The Leningrad Forestry Engineering Academy S.M. Korov. Invited to give paper in Symposium on Wood Anatomy and Taxonomy (Section III.A.7)

GORSHKOV, Georgiy Petrovich, doktor geologo-mineral. nauk; SMIRNOVA, N.P., red.; NAZAROVA, A.S., tekhn. red.

[Earth science and religion] Nauka o Zemle i religiia. Moskva, Izd-vo "Znanie," 1961. 32 p. (Vsesoiuznoe obshchestvo po rasprostraneniiu politicheskikh i nauchnykh znanii. Ser.12, Geologiia i geografiia, no.15) (MIRA 14:8)
(Earth) (Religion)

GORSHKOV, Georgiy Petrovich; PETRUSHEVSKIY, B.A., doktor geol.-mineral nauk, otv.red.; NIKOLAYEVA, L.K., red.izd-va; ROMANOV, G.N., tekhn.red.

[Problems of seismotectonics and seismic zones of the Union of Burma] Voprosy seismotektoniki i seismicheskoe raionirovanie territorii Birmanskogo Soiuza. Moskva, Izd-vo Akad. nauk SSSR, 1961. 124 p. (Akademiia nauk SSSR. Sovet po seismologii. Biulleten', no.12). (MIRA 14:12)

(Burma--Seismology)

BARSANOV, G.P., doktor geol.-mineral. nauk, prof., red.; KRUTOV, G.A., prof., doktor geol.-mineral. nauk, red.; GORSHKOV, G.P., prof., doktor geol.-mineral. nauk, red.; SERGEYEV, Ye.M., doktor geol.-mineral. nauk, prof., red.; ZABOROVSKIY, A.I., prof., doktor fiz.-mat. nauk, red.; LEONOV, G.P., red.; LAZAREVA, L.V., tekhn. red.

[Papers of the Faculty of Geology of Moscow University; for the 21st session of the International Geological Congress] Sbornik trudov geologicheskogo fakul'teta Moskovskogo universiteta; k XXI sessii Mezhdunarodnogo geologicheskogo kongressa. Moskva, Izd-vo Mosk. univ., 1961. 222 p. (MIRA 15:2)
(Geology--Congresses)

S/169/62/000/008/014/090
E202/E192

AUTHOR: Gorshkov, G.P.

TITLE: Problems of seismo-tectonic and seismic demarkation of the territory of the Burmese Union

PERIODICAL: Referativnyy zhurnal, Geofizika, no.8, 1962, 18-19, abstract 8 A 129. (Byul. Soveta po seysmol. AN SSSR, no.12, 1961, 130 pages, ill., charts).

TEXT: The history of studies on seismic phenomena in Burma is given. The following are discussed in chronological order: 1) description of separate earthquakes; 2) description of earthquakes occurring beyond the frontiers of Burma but felt on her territory; 3) catalogues of all earthquakes in Burma; 4) studies of seismics and seismogeology in Burma and neighbouring countries. The analysis of seismic conditions is accompanied by maps of isoseismal lines and the epicentres of the earthquakes. According to the data derived from the instrument observations a catalogue of 411 earthquakes is compiled covering the years 1906-1958 for the territory between 10° and 28° lat. N, and from 92° to 102° long. E. All shocks are classified according to their accuracy.

For the majority of earthquakes M is given and for some also the depth of the centre. A list of strong Indian earthquakes felt on Burmese territory is also given. A catalogue of earthquakes from 1829 to 1958 is also compiled from the data of the macroseismic observations and the ballity (intensity) is given according to Soviet State Standard ГОСТ (GOST) 6249-52. The seismic part of the work is illustrated by a chart of epicentres within the period 1906-1958 and an isoseismal chart of Burma and the neighbouring regions. Tectonically, Burma comprises the following: 1) Shan plateau; 2) central depression of the Irrawaddy and Sittang valleys; 3) the folded system of the Arakan ranges. These parts differ as much in their geological history as in their contemporary structure. Stratigraphy and history of the geological evolution are discussed while the recent tectonics of these zones are discussed in detail. Shan plateau represents a typical example of a terraced-like topography. The western boundary of the plateau passes along the fracture with an amplitude of up to 2 km. In addition to the edge fold in the north eastern part of Burma there is a number of large faults in the latitudinal and north east

directions; in the north and south of the country there are also numerous faults. Shan plateau is related to the Indo-Chinese massif, to which are also related the stable portions of certain subsidences (south of Siam and Cambodia, and the Siamese Gulf). The geology of Arakan is characterised by the absence of peneplain blocks, the development of faults and the increased intensification of folding in the north, on which also depends the high seismic character of this region. The intensive recent rise of Himalayas is complicated by the development of powerful folds and fractures, and is joined with the region of deep and fast settling (Assam and the valleys of Bramaputra) which explains the more intensive earthquakes. In the central depression there is a number of anticlines. The most interesting of these is the range of Pegu-Ioma, particularly its latent southern extension with which strong thrusts are associated. The eastern frontier of the depression passes along the edge of the fault and is highly seismic; the western has no seismological meaning since there are no regional fractures. The symptoms of recent volcanity have important meaning in the seismic relations, particularly in the north of the

depression. Analysis of geological history and the more recent movements established the fundamental map of the contemporary structure. Sources giving the foundation for the epicentral and isoseismal charts are discussed in a regional survey of the seismic phenomena in Burma. The distribution of epicentres in Burma is uneven; to the north of 22° lat.N. which covers 30% of the area of the chart there is approximately 77% of the tremors and 83% of the emitted energy. Himalayas up to their inversion southward are referred to the 9-12 bal. zone, while the southern extension to 9 bal. zone, taking into consideration the disappearance of tectonic structures in the south eastern extension of Himalayas they are in the 8 bal. zone. The north of Arakan belongs to a more seismic zone than its south and central parts, where earthquakes of 8 bal. strength are possible. Sharply arched range of Kumum is referred to 9 bal. zone, but within its boundaries there are structures in which earthquakes of 8 bal. may appear. The problem of Rangoon ballity is discussed. Tenasserim is classified to the 6 bal. zone; while the Andaman Sea is still, the Andaman islands are highly seismic. The chart of seismic regions reflects

the factual material and the general notion of the seismic order. The work is concluded by listing further problems for studies of the seismicity of Burma.
213 references.

[Abstractor's note: Complete translation.]

SYAGAYEV, Nikolay Andreyevich; GORSHKOV, G.P., prof., red.

[Comparative tectonics of Mesozoic troughs in the northern part of Central Siberia] Sravnitel'naia tektonika mezozoiskikh prgibov severa TSentral'noy Sibiri. Red. Gorshkov G.P. Moskva, Izd-vo Mosk. univ., 1962. 345 p. (MIRA 15:6)
(Siberia--Geology, Structural)

BROD, I.O., prof., doktor geol.-miner. nauk; VARSANOF'YEVA, V.A., prof., doktor geol.-miner. nauk; VELIKOVSKAYA, Ye.M., prof., doktor geol.-miner. nauk; GORDEYEV, D.I., prof., doktor geol.-miner. nauk; DOBROV, S.A., doktor geol.-miner. nauk [deceased]; KOF, M.I., kand.tekhn.nauk, [deceased]; KUZNICHEVA, Ye.I., mladshiy nauchnyy sotr.; KUZNETSOV, Ye.A., prof., doktor geol.-miner. nauk; LEONOV, G.P., prof., doktor geol.-miner. nauk; MENNER, V.V., dotsent, doktor geol.-miner. nauk; NAZARENKO, I.I., kand. sel'khoz.nauk; POBEDIMSKAYA, Ye.A., assistent; POPOV, S.P., prof., doktor geol.-miner. nauk; SMIRNOV, V.I.; SMIRNOV, N.N., prof., doktor geol.-miner. nauk; SMOL'YANINOV, N.A., prof., doktor geol.-miner. nauk [deceased]; FENIKSOVA, V.V., dotsent, kand.geol.-miner. nauk; SHAFRANOVSKIY, I.I., prof., doktor geol.-miner. nauk; Prinimali uchastiye: BARSANOV , G.P., prof., doktor geol.-miner. nauk; BOKIY, G.B.; GORSHKOV, G.P., prof., doktor geol.-miner. nauk; KUDRYAVTSEV, V.A., prof., doktor geogr. nauk; MARKOV, P.N., dotsent, kand.geol.-miner. nauk; MOROZOV, S.S., prof., doktor geol.-miner. nauk; ORLOV, Yu.A., akademik; SERGEYEV, Ye.M., prof., doktor geol.-miner. nauk; TVALCHRELIDZE, A.A.; GEORGIYEVA, G.I., tekhn. red.

(Continued on next card)

BROD, I.O.—— (continued) Card 2.

[History of geology at Moscow University] Istoriia geologicheskikh nauk v Moskovskom universitete. Pod red. D.I.Gordeeva. Moskva, Izd-vo Mosk. univ., 1962. 351 p. (MIRA 15:7)

1. Moscow. Universitet. Geologicheskiy fakul'tet. 2. Chlen-korrespondent Akademii nauk SSSR (for Smirnov). 3. Chlen-korrespondent Sibirskogo otdeleniya Akademii nauk SSSR (for Bokiy). 4. Deystvitel'nyy chlen Akademii nauk Gruzinskoy SSR (for Tvalchrelidze).
(Moscow University) (Geology--Study and teaching)

GORSHKOV, Georgiy Petrovich, prof; YAKUSHOVA, Aleksandra Fedorovna, prof.; BELYAKOVA, Ye.V., red.; LAZAREVA, L.V., tekhn. red.

[General geology] Obshchaia geologiia. Izd.2. Moskva, Izd-vo Mosk. univ., 1962. 563 p. (MIRA 15:4)

1. Kafedra dinamicheskoy geologii Moskovskogo gosudarstvennogo universiteta (for Gorshkov, Yakushova).
(Geology)

GORSHKOV, Georgiy Petrovich; SHEYNMAN, Yu.M., doktor geol.-mineral. nauk, otv. red.; MEDER, V.M., red. izd-va; YEGOROVA, N.F., tekhn. red.

[Seismicity of Africa]. O seismichnosti Afriki. Moskva, Izd-vo Akad. nauk SSSR, 1963. 39 p. (Akademiia nauk SSSR. Sovet po seismologii. Biulleten', no.13). (MIRA 16:6)

(Africa—Seismology)

ACC NR: AP7004580 SOURCE CODE: UR/0384/66/000/005/0036/0042

AUTHOR: Gorshkov, G. P. (Professor)
ORG: none
TITLE: Earthquakes in Tashkent
SOURCE: Zemlya i vselennaya, no. 5, 1966, 36-42
TOPIC TAGS: earthquake, geophysics / Tashkent
ABSTRACT: A feature article on the Tashkent earthquake of 26 April 1966 has been published, accompanied by photographs of destruction. The history of earthquakes at Tashkent is reviewed, accompanied by a table listing the most important earthquakes at that city since 1929. In 1949 Tashkent was assigned to areas subject to class 8 earthquakes, and since that time all structures have been built to withstand earthquakes of that intensity. Among the peculiarities of this earthquake: a) the epicenter was at the very center of the city, a very rare occurrence; b) the earthquake focus was situated at a very shallow depth -- about 10 km. The energy of this earthquake was 10^{21} ergs. Thousands of structures were destroyed or damaged -- a total area of working and living space of two million square meters and 45,000 families were left without shelter. Most of the destroyed structures were pre-war or pre-Revolution, and most were one-story buildings. The most recent studies confirm that this class 8 earthquake is the strongest to which Tashkent is subject and quakes of this intensity should occur once in several decades. Orig. art. has: 7 figures and 2 tables.
[JPRS: 38,937]

SUB CODE: 08 / SUBM DATE: none

AUTHOR: Gorshkov, G.S. SOV/130-58-7-18/35

TITLE: More Pig Iron for the Nation (Bol'she chuguna strane)

PERIODICAL: Metallurg, 1958, Nr 7, pp 34 - 35 (USSR).

ABSTRACT: The author of this brief note states that through increased mechanisation and better organisation, the introduction of the 7-hour day at Nr 4 blast furnace at the Magnitogorsk Metallurgical Combine has led to increased earnings and a labour-force increase of only 10. He contrasts the difficult conditions during his early years (1932 onwards) at the plant with those now prevailing and gives the present annual iron production per worker as over 7,000 tons. In honour of the "Day of the Metallurgist", a saving of 4 million roubles has been effected and tens of thousands of extra tons of pig iron have been produced in the blast-furnace department. There is 1 illustration.

ASSOCIATION: Magnitogorskiy metallurgicheskiy kombinat (Magnitogorsk Metallurgical Combine)

Card 1/1 1. Iron--Production

TARKHANOV, I.Ye., podpolkovnik yustitsii; GORSHKOV, G.S., kapitan yustitsii

Legal status of military ships in foreign waters and ports. Mor. sbor. 47 no.9:14-20 S '64. (MIRA 18:7)

N. M. GORSHKOV, G. S.

New mineral from the region of Lake Inder. G. S. Gorshkov. (*Compt. rend. Acad. Sci. U.R.S.S.*, 1941, **30**, 254—256).—The new mineral, *inderborite*, has the formula $CaO,MgO,3B_2O_3,11H_2O$, and is analogous to hydroboracite. It is sparingly sol. in H_2O and cold acids, but dissolves readily in hot HCl. d = 1·928—1·930; hardness = 2·5. Optical and crystallographic properties are recorded.

A. J. M.

Dept. Mineralogy and Petrography
Moscow State Univ

C A GORSHKOV, G. S.

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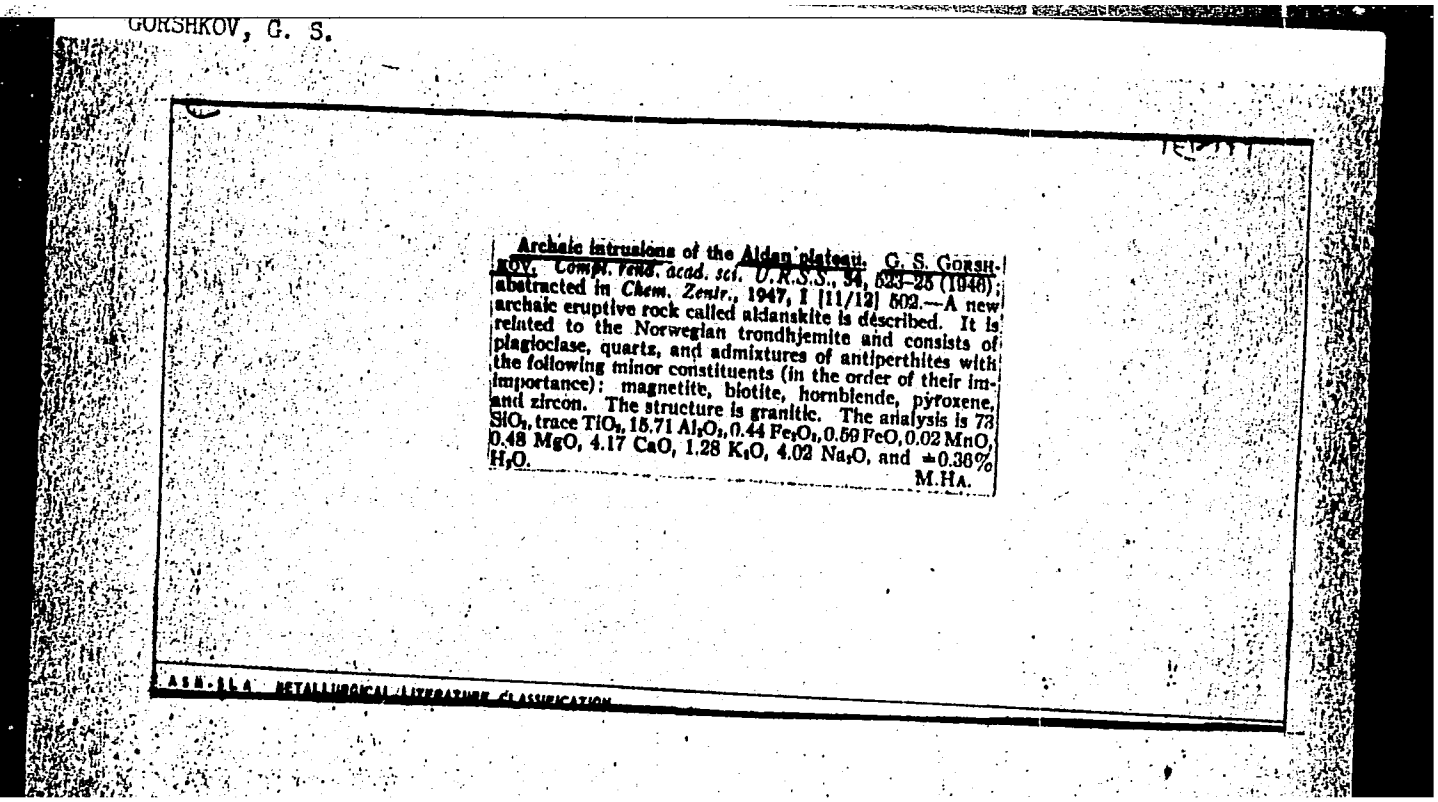
Phlogopites. (G. S. Gorshkov. (Geol. Min. Inst. Geol Nauk, Akad. Nauk S.S.S.R.). *Doklady Akad. Nauk S.S.S.R.* **90**, 433-6(1945).—In the South of Yakutia, on the Aldan Plateau, rich deposits of phlogopite were discovered and explored; 3 of these deposits are characterized in their mineralogical and chem. nature: Emel'dzhak, Chuga, and Kuronakh. The color of the crystals is prevailingly dark yellow-brown, sometimes silvery, with abundant gas inclusions. All the crystals are biaxial, with $2V$ varying between 7 and 13°, with a dispersion of the axes $r < v$. The orientation is $b = \beta$; the ns are generally $\alpha = 1.553$-1.562; $\gamma = 1.590$-1.596; ds. varying between 2.79 and 2.91. The chem. compn. of most of these phlogopites is very similar to those of Canada, with a relatively high Fe_2O_3 (1.9-3.1%) content, K_2O about 10%, F 2.2-2.3%. In these characteristics the mica is different from that of Sludyanka; additionally, BaO content of 0.2-0.7% is remarkable, while Na_2O (0.1-0.5%) and TiO_2 (0.4-0.5%) are low. The spectrochem. analysis of the phlogopites indicated the presence of Be, As, Tl, Sb, Cs, Ag, Cd, Mo, Ta, Cb, Bi, In, W, Te, Sc. The relatively high Fe content of the Emel'dzhak phlogopite is the reason for its inferior dielec. quality while the other deposits furnish an excellent industrial raw material. The economic importance of these deposits is very high.

W. Eitel



GORSHKOV, G. S.

Archaic intrusions of the Aldan plateau. G. S. Gorshkov. *Compt. rend. acad. sci. U.R.S.S.*, 54, 823–25 (1946); abstracted in *Chem. Zentr.*, 1947, I [11/12] 502.—A new archaic eruptive rock called aldanskite is described. It is related to the Norwegian trondhjemite and consists of plagioclase, quartz, and admixtures of antiperthites with the following minor constituents (in the order of their importance): magnetite, biotite, hornblende, pyroxene, and zircon. The structure is granitic. The analysis is 73 SiO_2, trace TiO_2, 15.71 Al_2O_3, 0.44 Fe_2O_3, 0.59 FeO, 0.02 MnO, 0.48 MgO, 4.17 CaO, 1.28 K_2O, 4.02 Na_2O, and +0.36% H_2O.

M.Ha.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

GORSHKOV, G.S.

Sarychev Peak. Biul.Vulk.sta. no.15:3-7 '48. (MLRA 9:11)
(Sarychev Peak)

GORSHKOV, G. S.

PA 5/49T27

USSR/Geography Mar/Apr 48
Volcanology

"Nomenclature of Kurile Island Volcanoes," G. S. Gorshkov, 5½ pp

"Iz v-s Geog Obshch" Vol LXXX, No 2

Before 1875, place names were Ainu and Russian. Present maps show Japanese names. Since islands have returned to USSR, historical and scientific justice demands that former names be restored. Some new names have been given.

[redacted] 5/49T27

GORSHKOV, G. S.

"Seismic Observations in the Village of Klyucha (From 28 August to December 1948)" (Vulcanology, Vulcanic Activity) Byull. Volkanolog. stantsii, No 19, 1953, pp 14-31

Abs

W-31146, 1 Feb 55

GORSHKOV, G.S.

Activity of the volcanological station during 1949. Biul.Volk.sta. no.19:32-37 '53. (MLRA 8:11)

(Kamchatka--Volcanoes)

GORSHKOV, G.S.

GORSHKOV, G.S.

State of the Klyuchevskaya volcanic group during the first half of 1949. Biul.Volk.sta. no.19:38-43 '53. (MLRA 8:11)
(Klyuchevskaya Sopka)

GORSHKOV, G.S.

Asyrmintar, the lost volcano of the Kurile Islands. Biul.Vulk.sta. no.19:62-63 '53. (MLRA 8:11)
(Kurile Islands--Volcanoes)

GORSHKOV, G. S. ; KVASHA, L. G.; PIYP, B. I.

"Aleksandr Nikolayevich Zavaritskiy," Tr. Labor. vulkanologii AN SSSR, No 8, 5-17, 1954

An article in memory of Academician A. N. Zavaritskiy (1884-1953), outstanding Soviet scientist; specialist in the field of petrography, mineral deposits, vulcanology, general geology, and tectonics; and author of more than 220 works.

GORSHKOV, G.S.

Chronology of volcano eruptions in the Kurile chain (1713-1952).
Trudy Lab.vulk. no.8:58-99 '54. (MIRA 8:4)
(Kurile Islands—Volcanoes)

GORSHKOV, G. S., and BYLINKINA, A. A.

"Observations on the Eruptions of the Volcano Shiveluch in 1948-1950"
Byul. Vulkanol. st. AN SSSR, No 20, 1954, 8-31

At the end of 1944, after a rest of 14 years, the volcano Shiveluch began a new eruptive cycle, lasting up to April 1950. The authors observed the eruptions of the volcano from September 1948 to the end of the eruptions in April 1950. They briefly comment on the course of the eruptive activity of the volcano from December 1948 to the end of August 1948, and present data on actual observation for each month. They clearly distinguish three prinicipal, but not equal in time, periods of strong activity: from 30 August 1948 to April 1950; 2 August 1949; 3 March 1950 to April 1950. (RZhGeol, No 6, 1955)

SO: Sum-No 787, 12 Jan 56

GORSHKOV G.S.

BYLINKINA,A.A. [deceased] GORSHKOV,G.S.

State of the volcanoes in the Klyuchevskaya group during the latter half of 1949 Biul.Vulk.sta. no.20:32-37 '54. (MLRA 8:11)
(Kamchatka--Volcanoes)

Gorshkov, G.S.

BYLINKINA, A.A. [deceased]; GORSHKOV, G.S.; OGORODOV, N.V.

Ascent on Klyuchevskaya Sopka, July 29, 1951. Biul.Vulk.sta. no.20: 38-47 '54. (MLRA 8:11)

(Klyuchevskaya Sopka)

GORSHKOV, G.S.

Krenitsyn Peak. Biul.Vulk.sta. no.20:60-63 '54. (MLRA 8:11)
(Onekotan Island)

GORSHKOV, G.S.

BYLINKINA, A.A.; GORSHKOV, G.S.

The state of Klyuchevskaya Sopka during January-April, 1950. Biul. Vulk.sta. no.21:3-5 '54. (MLRA 8:11)
(Klyuchevskaya Sopka)

GORSHKOV, G.S.

GORSHKOV, G.S.

Seismic observations during 1949. Biul.Vulk.sta. no.21:19-39 '54.
(Earthquakes--Observations) (MLRA 8:11)

GORSHKOV G.S.

GORSHKOV, G.S.

Observations of slopes in the vicinity of Klyuchevskaya Sopka. Biul. Vulk.sta. no.21:40-42 '54. (MIRA 8:11)
(Klyuchevskaya Sopka)

GORSHKOV, G.S.

GORSHKOV, G.S.

Paramushir Island volcanoes and their state during the summer of 1953. Biul.Vulk.sta. no.22:9-29 '54. (MLRA 8:11)
(Paramushir Island--Volcanoes)

GORSHKOV, G.S.

GORSHKOV, G.S.

Seismic observations during 1950. Biul.Vulk.sta. no.22:44-58 '54.
(Earthquakes--Observations) (MIRA 8:11)

GORSHKOV, G.S.

Seismic observations in the first half of 1951. Biul.Vulk.sta. no.23:24-32 '54. (MLRA 8:11)
(Kamchatka--Earthquakes--Observations)

GORSHKOV, G.S.

Volcanic tremor related to the rupture of Bylinkina cone. Biul.Vulk. sta. no.23:33-37 '54. (MLRA 8:11)
(Klyuchevskaya Sopka)

GORSHKOV, G.S.

Traces of Cenozoic volcanic activity in the region of the Aldan Plateau. Biul.Vulk.sta. no.23:51-53 '54. (MLRA 8:11)
(Aldan Plateau--Volcanic ash, tuff, etc.)

ZAVARITSKIY, A.N., akademik; GORSHKOV, G.S.; LADYCHUK, L.P., redaktor; MOSKVICHEVA, N.I., tekhnicheskiy redaktor.

Volcanoes of Kamchatka. Trudy Lab.vulk. no.10:3-151 '55.
(Kamchatka--Volvanoes) (MLRA 9:1)

GORSHKOV, G.S.

The first eruption in recorded history of the Bezymyannaya Sopka (a telegraphic report). Biul.Vulk.sta. no.24:70 '56. (MLRA 9:10)

(Bezymyannaya Sopka)

GORSHKOV, G.S.

On the depth of the magmatic focus of the Klyuchevskaya Sopka. Dokl.AN SSSR 106 no.4:703-705 F '56. (MLRA 9:6)

1.Kamchatskaya vulkanologicheskaya stantsiya Akademii nauk SSSR pos.Klyuchi na Kamchatke. Predstavleno akademikom A.G.Betekhtinym.

(Klyuchevskaya Sopka--Geology)

GORSHKOV, G. S.

with TOVAROVA, I. I., "Geochemical Effect of Bezymianny Volcano Eruption,"

"On the Relations Between Seismic and Volcanic Phenomena and the Energy Balance of Bezymianny Volcano Eruption,"

"Volcanic Zone of the Kurile Islands,"
"Kamchatka Valley of Ten Thousand Smokes,"
papers presented at the 9th Pacific Science Congress, Bangkok, Thailand, 19-29 Nov 57

Trans. in Mining Gazette, 2, No. 11, 1957, Bangkok

Lab. of Vulcanology, Acad. Sci. USSR

Gorshkov, G.S.

VLODAVETS, V.I.; GORSHKOV, G.S.; PIYP, B.I.

Foreword. Biul. Vulk. sta. no.25:3-4 '57. (MIRA 10:8)
(Volcanoes)

15-1957-10-13872

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 10, p 71 (USSR)

AUTHOR: Gorshkov, G. S.

TITLE: Catalog of the Active Volcanoes of the Kurile Islands (Katalog deystvuyushchikh vulkanov Kuril'skikh ostrovov)

PERIODICAL: Byul. Vulkanol. st. AN SSSR, 1957, Nr 25, pp 96-178

ABSTRACT: The volcanoes of the Kurile Islands are described according to the scheme used for the volcanoes of Kamchatka (see abstract 13871). A map of the active volcanoes of the Kurile Islands is presented. The following 39 volcanoes are included in the catalog: Alaid (Alaid Island), Ebeko, Chikurachki, Tatarinov, Karpinskiy, Fuss (Paramushir Island), Ayrmintar, Nemo, Krenitsyn (Onekotan Island), Severgin (Kharimkotan Island), Sinark , Kuntomintar (Shiashkotan Island), Ekarma (Ekarma Island), Chirinkotan (Chirinkotan Island), Raykoke (Raykoke Island), Sarychev (Matua Island), the

Catalog of the Active Volcanoes of the Kurile Islands 15-1957-10-13872

submarine volcanoes of 1924 (at Matua Island), Rasshua (Rasshua Island), Ushishir (Ushishir Island). Pallas (Ketoy Island), Prevo, Zavaritskiy, Goryashchaya Sopka (Simushir Island), Chernyy, Snou (Chirpoy Island in the Chernyye Brat'ya Islands), Brat Chirpoyev (Brat Chirpoyev Island in Chernyye Brat'ya Islands), Trezubets, Berg, Kolokol (Urup Island), Kudryavyy, Chirip, Baranskiy, Tebenkov, Ivan Groznyy, Atsonupuri, Berutarube (Iturup Island), Tyatya, Mendeleyev and Golovnin (Kunashir Island). Photographs of all the volcanoes are shown. The bibliography contains 49 references.

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S. P. Bryzgalina

GORSHKOV, G.S.

State of active volcanoes in northern Kamchatka from September 16, 1954 to December 31, 1955. Biul. Vulk. sta. no.26:3-12 '57.
(Kamchatka--Volcanoes) (MIRA 11:5)

GORSHKOV, G.S.

Eruption of the Bezymyannyy volcano; preliminary report. Biul. Vulk. sta. no.26:19-72 '57. (MIRA 11:5)
(Bezymyannyy volcano)

GORSHKOV, G.S.

Active volcanoes of the Kurille Islands. Trudy Lab.vulk. no.13:5-70 '58. (MIRA 12:3)

(Kurille Islands--Volcanoes)

SOV/11-58-11-2/14

AUTHOR: Gorshkov, G.S.

TITLE: Certain Problems in the Theory of Volcanology (Nekotoryye voprosy teorii vulkanologii)

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geologicheskaya, 23 Nr 11, pp 21 - 27 (USSR) 1958

ABSTRACT: The seismograph of the Kamchatka Volcanological Observatory of the AS USSR, in Klyuchi, has registered a large number of earthquakes occurring in various regions of the globe. The author found that in the seismograms registering earthquakes with an epicenter in southern Japan, the transversal seismic waves were blocked. In the other two observatories in Petropavlovsk and Magadan these waves were registered normally. The epicenters of these earthquakes were situated on a distance from 24 to 48-50° on the azimuth 213-230° from the Klyuchi observatory. In this direction lies the Klyuchi group of volcanoes, and the author assumed that a large liquid magmatic hearth situated under this volcanic group was responsible for the blocking of the transversal seismic waves. By taking and differentiating the hodograph

$$\cos e = \frac{d T}{d \Theta} V_s,$$

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the angle e of the exit of transversal waves could be calculated. In the formula, T is the time of the run of the wave on the epicentral distance, θ-, and V_s is the speed of the transversal wave near the earth surface. Figure 2 gives the results of calculations of the angles of exit of the transversal waves, as the blocking occurred at the epicentral distances from 24 to 48-50°, corresponding on figure 2 to the angle of exit of these waves from 57.5 to 64.5°. In this way, the magmatic hearth was calculated to be situated from 50 to 70 km below the surface. Its expansion is calculated to be 25-35 km, and its volume - 10-20,000 cubic km. The author also calculated the elastic constants of the magmatic hearth from a seismogram (Figure 1). The obtained value of compressibility is on the average between a typical hard body and a typical liquid one. The occurrence of the magmatic hearth on the limits of the crust where, according to Ye.A. Lyubimova, [Ref. 4], the curves of the temperatures of the earth and of the melting of the substance almost coincide, creates the most favorable conditions for the transition of the substance into a liquid state at a change in thermodynamic conditions. The occurrence

of the magmatic hearths at such depths also explains the uniform character of lavas from different volcanoes situated along the periphery of the Pacific Ocean, thousands of miles distant from each other. There is 1 graph, 1 diagram and 10 references, 5 of which are Soviet, 3 American and 2 German.

ASSOCIATION: Laboratoriya Vulkanologii AN SSSR (The Laboratory of Volcanology of the AS USSR)

SUBMITTED: December 26, 1957

1. Volcanoes--Geology 2. Volcanoes--Theory 3. Seismographs --Applications 4. Seismic waves--Performance 5. Earthquakes

GORSHKOV, G.S.

Status of volcanoes in the northern part of Kamchatka in 1956.
Biul. Vulk. sta. no.27:3-15 '58. (MIRA 11:10)
(Kamchatka--Volcanoes)

GORSHKOV, G.S.

Eruption of new adventive craters of the Klyuchevskiy volcano in the summer of 1956. Biul. Vulk. sta. no.27:25-37 '58.
(Klyuchevskiy volcano) (MIRA 11:10)

SOV/26-58-1-10/36

AUTHOR: Gorshkov, G.S., Candidate of Geologico-Mineralogical Sciences

TITLE: An Unusual Volcanic Eruption on the Kamchatka Peninsula (Neobychaynoye izverzheniye na Kamchatke)

PERIODICAL: Priroda, 1958, Nr 1, pp 61-68 (USSR)

ABSTRACT: In 1955, the Bezymyannyy Volcano on the Kamchatka peninsula erupted, although it was considered to be extinct. Mount Bezymyannaya is situated in the very center of the Klyuchevskaya group of volcanoes. Its absolute height up to the eruption was 3, 085 m, its relative height from the base proceeded from 700 m in the north to 1,200 m in the south. The eruption started at about 0630 hours on 22 Oct 55. On 28 Oct an expedition set out to the volcano on two GAZ-63 trucks. An observation point was chosen 16 km from the volcano. The diameter of the new crater was not over 250 m. At a height of 600 to 700 m, the dust column went up almost vertically and then sloped northward. In the night of 6 to 7 Nov 1955, the eruption became more violent. In the night of 13 Nov, the dust cloud over the crater had attained a height of 5 km, and of 7.5 km or 10.5 km above sea level on 14 November. By 21 November the entire Klyuchevskaya area was covered with a 22 mm thick cover of dust - 14.4 kg per square m. From the

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end of November on, the eruption violence began to subside. Towards the beginning of December the volcano entered a period of moderate activity which lasted till 29 March 1956. On 30 March a large eruption destroyed the summit of the volcano and changed the shape and relief of its surroundings. At 1820 hours of 30 March, the dust ejection had created complete darkness. The air was saturated with electricity. At about 2100 hours parts of the sky could be seen again. Within 3.5 hours the Klyuchevskaya area was covered with a 20 mm thick layer of dust equaling 24.5 kg per square meter. As a result of the eruption, Bezymyannyy volcano had altered its shape entirely. From a straight slightly incised cone it had been transformed into a semi-annular caldera. The new gigantic crater took in not only the summit but also the entire southeast slope right down to the base. It measured 1.5 x 2 km. The upmost point of the volcano had been lowered by 150 to 180 m. At present it has an absolute height of 2,900 m. The Sukhaya Khapitsa valley which originates at the volcano's east slope was covered by a thick steam of a chaotic agglomerate extending over 16 km. In eastern direction the vicinity of the volcano was covered by a 0.5 m thick layer of volcanic sand over a distance of

up to 25 km, trees with a diameter of 25 to 30 cm were broken and uprooted by the violence of the eruption. Mud streams had gone eastward up to the Bolshaya Khapitsa river and made a northward turn along this river's valley; then they fell into the Kamchatka river valley at a distance of 80 to 85 km from Bezymyannyy volcano. Following the eruption of 30 March 1956, extrusion of a lava boss began in the new crater. The formation of the boss practically ended by July 56. It was 320 m high in August 1956. The lava of the boss and the agglomerated stream was hornblende andesite. Late in the fall of 1956 the eruption ceased entirely. At the end of December the boss had cooled off so much that, with the exception of its peak, it was entirely covered with snow. In the following months, the volcano displayed only an intensified activity of vapor emission. The agglomerate stream was examined in summer 1956. If its mean thickness is assumed to be 50 m, the stream's total volume amounts to 3 cubic km. During the 9 months from October 1955 to June 1956, 33,150 earth shocks were registered in the Klyuchevskaya area, i.e. an average of one earthquake every 12 minutes. In the initial eruptive phase, the number of earthquakes soon went up to 350 to 450 within 24 hours. The energy of all earthquakes

during the active period of the volcano equaled 10^{19} erg per 24 hours. It decreased to 10^{14} erg after 30 March 1956, with one earthquake per 24 hours. An extremely weak, gradually dying seismic activity continued till the end of 1956. The mean energy amount of the gigantic eruption of 30 March 1956 was determined by 3 methods and corresponds to approximately 4×10^{23} erg. The initial eruption speed was 500 to 600 m/sec. The initial eruption pressure corresponded to 3,000 atm. The eruption heat energy was 3.6×10^{25} erg, while the total eruption energy is only 1 % of this magnitude. There are 12 photos and 1 map.

ASSOCIATION: Kamchatskaya vulkanologicheskaya stantsiya Akademii nauk SSSR (Kamchatka Volcanological Station of the USSR Academy of Sciences)

GORSHKOV, G.S.,

On the classification and terminology of Pelee and Katmai type eruptions.

Paper presented at the 12th General Assembly of the IUGG
Helsinki, Finland July 1960

KVASHA, L.G., GORSHKOV, G.S.

Vector diagram of the chemical components of "tecties" and of the earths lavas.

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"METEORITKA" ("eteorites-Studies) Issue no. 20 - 1961, sponsored by the "Committee on Meteorites" of the Soviet Academy of Sciences - Moscow - 1961, 208 pages, and containing Collected Works("Trudy") of the "9th Meteorite Conference Organized by the Committee on Meteorites of the Soviet Academy of Sciences" and Held in KIEV on 2-4 June 1960.

BOGOYAVLENSKAYA, G. Ye.; GORSHKOV, G.S.; TOVAROVA, I.I.

Origin of lavas of the adventive craters of the Keyuchevskiy Volcano (1956). Biul.Vulk. sta. no.30:17-23 '60. (MIRA 14:3)
(Keyuchevskiy Volcano—Lava)

GORSHKOV, G.S.

The Zavaritskiy Caldera. Biul.Vulk. sta. no.30:30-49 '60.
(Zavaritskiy Volcano)

Papers submitted for the 10th Pacfic Science Congress, Honolulu, Hawaii 21 Aug-6 Sep 1961.

BUTINOV, N. A., Institute of Ethnology - "The ethnolinguistic groups in New Guinea" (Section II.A.7.C)

CHEKOTILLO, K. A., Institute of Oceanology - "The investigation of the horizontal and vertical circulation of waters during the winter period in the northern part of the Pacific Ocean" (Section VII.B)

DEMENT'YEV, G. P., and VINOKUROV, A. A., Chairman, Commission for Preservation of Nature, Academy of Sciences USSR - "The role of the birds of Siberia and the Far East of the USSR as possible spreaders of virus and rickettsial disease" (Section III.D.6)

DZERDZEYEVSKIY, B. L., Institute of Geography, Academy of Sciences USSR - "The analysis of some characteristic processes of atmospheric circulation overthe Antarctic" (Section VII.D.1)

FAVORSKAYA, M. A., Institute of Geology - "Advances in recent magnetism investigations of the Pacific shores of the USSR" (Section VII.C)

GALERKIN, I. I., Institute of Oceanology - "On the seasonal variations of level near the coasts of the Pacific" (Section VII.B)

GERASIMOV, I. P., Institute of Geography - "Soil formation in the monsoon climate of the Far East and the influence of recent volcanism" "Present laterites and lateritic soils" (Section I.C)

GORYACHEV, A. V., Institute of Earth Physics imeni O. Yu. Schmidt - "Geotectonic conditions of the Kurile Kamchatkin zone as an example of structural reformation of the earth's crust in the northwestern part of the Pacific basin" (Section VII.C.2)

GEYNRIKH, A. K., Institute of Oceanology - "Specific features in the distribution of zooplankton in the tropical part of the Pacific Ocean" (Section III.C)

GLIKMAN, L. S., The Geological Museum imeni A. P. Karpinskiy, Academy of Sciences USSR - "Sharks' teeth found at the bottom of the Pacific Ocean" (Section III.C)

GORSHKOV, G. S., The Laboratory of Volcanology - "Petrochemical features of volcanism in relation to the types of the earth's crust" (Section VII.C.3)

GUZHE, A. P., Institute of Oceanology - "The stratigraphy of bottom sediments and the paleogeographical conditions of sedimentation in the Pacific" (Section VII.C.1)

IGNAT'YEV, Ye. I., Institute of Geography of Siberia and the Far East - "The original trends and results of medical geographical research in the Soviet Far East" (Section VIII.B.4)

KAGANOVSKIY, A. G., Pacific Ocean Scientific Research Institute of Marine Fishing and Oceanography - "The ichthyological materials collected during the Bering Sea expedition sponsored by the All-Union and Pacific Ocean Scientific Research Institute of Fishing and Oceanography in 1958-59" (Section VII.C)

KAMENKOVICH, V. M., Institute of Oceanology - "Method of computing stationary currents taking into account the effect of islands" (Section VII.B)

KANAYEV, V. F., Institute of Oceanology - "The submarine relief of the Kuril arc" (Section VII.C.1)

KASS, T. S., Institute of Oceanology - "Deep-sea fishes of the northern part of the Pacific and adjacent seas" (Section III.C)

KHLEBOVICH, V. V., and USHAKOV, P. V., Institute of Zoology - "Polychaeta of the seas in the northwest Pacific and problems of amphi-Pacific distribution" (Section III.C)

KHUNDZHUA, G. G., Moscow State University, Physical Faculty - "The calculation of turbulent diffusion coefficients based upon the recordings of electroconductivity fluctuations and current rate at sea" (Section VII.B.5)

KITAYGORODSKIY, S. A., Institute of Oceanology - "Some regularities of the thermocline formation in the ocean" (Section VII.B)

KLENOVA, M. V., and LAVROV, V. M., Institute of Oceanology - "....(Illegible) and relief of the continental shelf of the western seabourd in southern Sakhalin" (Section VII.C.1)

KLUMOV, S. K., Institute of Oceanology - "The zoogeographical zonation of the Kuril Islands and in the waters of adjacent areas" (Section VI.D)

KOBLENTS-MISHKE, O. I., Institute of Oceanology - "A survey of data concerned with primary production in the northern part of the Pacific" (Section III.A)

GORSHKOV, G.S.

Structure of the Aragats Volcano and its ignimbrites. Trudy Lab. vulk. no.20:66-71 '61. (MIRA 14:11)

1. Laboratoriya vulkanologii AN SSSR.
(Aragats, Mount--Volcanic ash, tuff, etc.)

GORSHKOV, G.S.

Welded tuff of the Zavaritskiy Caldera (Simushir Island, Kurile Islands). Trudy Lab. vulk. no.20:102-107 '61. (MIRA 14:11)

1. Laboratoriya vulkanologii AN SSSR.
(Zavaritskiy volcano—Volcanic ash, tuff, etc.)

KVASHA, L.G.; GORSHKOV, G.S.

Vector diagram of the chemical composition of tektites and lavas.
Meteoritika no.20:193-203 '61. (MIRA 14:5)
(Tektites) (Lava)

S/169/62/000/010/019/071
D228/D307

AUTHOR: Gorshkov, G.S.

TITLE: Connection of volcanic and seismic phenomena during the eruption of the Bezymyannyy Volcano (1955-1956)

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 10, 1962, 20, abstract 10A131 (Byull. Vulkanol. st. AN SSSR, no. 31, 1961, 32-37)

TEXT: More than 33,000 earthquakes, connected with the eruption of the Bezymyannyy Volcano in Kamchatka, were recorded in 9 months (September 1955 - June 1956). The energy of all earthquakes was calculated from the empirical formula $\lg E = 1.51 gA + 14.5$, where E is in ergs and A is the maximum displacement in microns, and a graph of the change in their number and energy during the eruption was plotted. The number of earthquakes varied abruptly from one stage of the eruption to another, but their energy underwent less variation. It is supposed that there were two types of earthquake: numerous weak shocks with a near surface hypocenter, which

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were closely connected with the eruption's external manifestations; and sharper but stronger earthquakes (energy of about 10^{19} ergs) with a deeper hypocenter, which depended not on the eruption's external manifestations, but were connected with its general course. The opinion is expressed that analyzing the change in the energy of volcanic earthquakes may help not just in forecasting the beginning of an eruption, but also in predicting the general course of an eruption that has already begun.
[Abstracter's note: Complete translation]

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KVASHA, L.G.; GORSHKOV, G.S.

Petrochemistry of tektites and earth lavas. Dokl. AN SSSR 137 no.1:171-173 Mr-Ap '61. (MIRA 14:2)

1. Komitet po meteoritam AN SSSR i Laboratoriya vulkanologii AN SSSR. Predstavleno akademikom V.G.Fesenkovym.
(Tektite)

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USSR/Geophysics - Seismic classification FD-758

Card 1/1 : Pub 44-6/11

Author : Belousov, V. V.; Gorshkov, G. Ts.; Petrushevskiy, B. A.

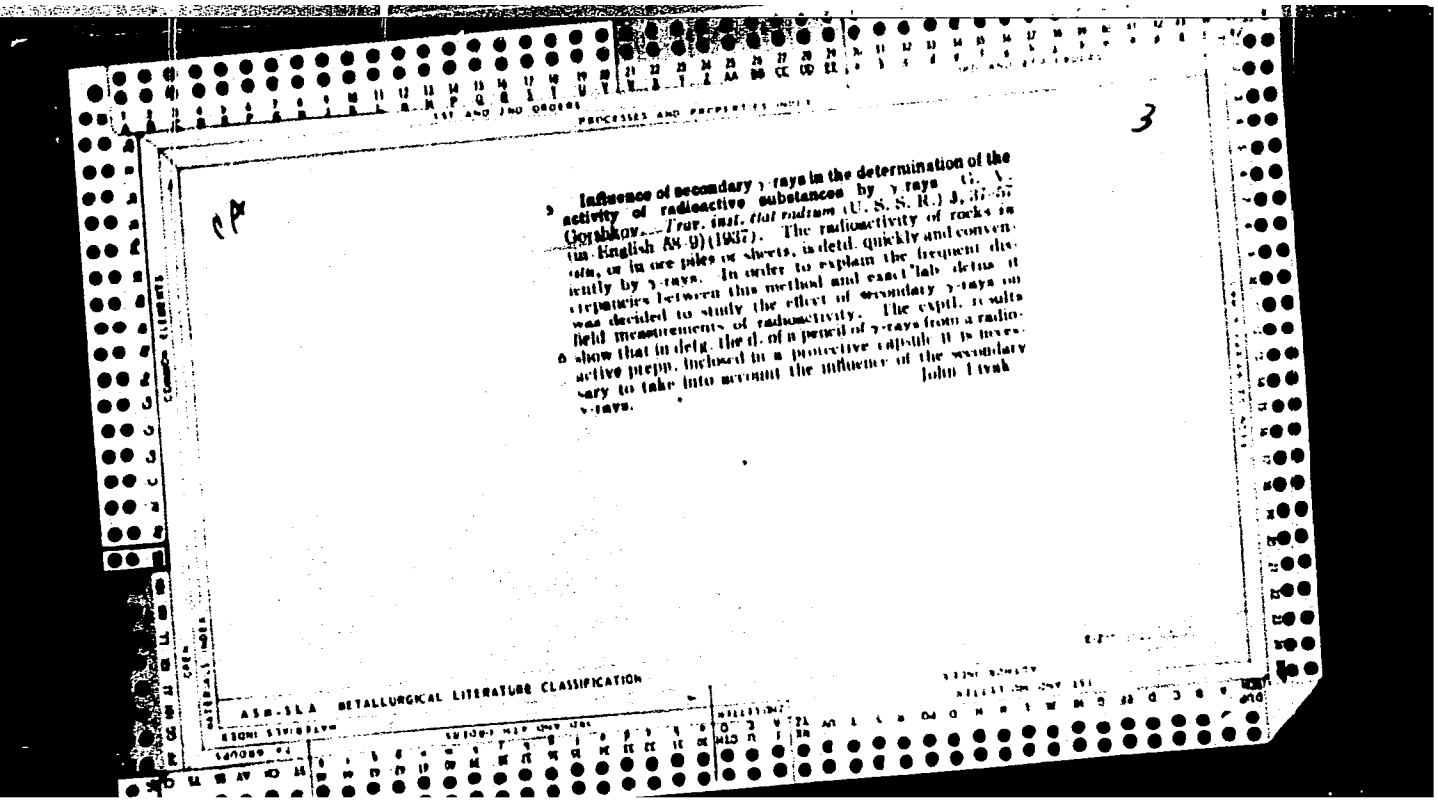
Title : Concerning I. Ye. Guvin's article "Seismic regionalization of southwest Turkmenia"

Periodical : Izv. AN SSSR, Ser. geofiz., 443-450, Sep-Oct 1954

Abstract : Discuss recent statements of I. Ye. Gubin concerning his proposed so-called seismotectonic method of seismic classification of regions. Establish that these statements are but slightly connected with the author's earlier remarks on the given problem. Show that it is impossible to talk about the existence of a new seismotectonic "method." Eleven references, all USSR (6 by Gubin, and the rest by V. V. Belousov, G. P. Gorshkov, and Ye. F. Savarenskiy).

Institution : Geophysics Institute, Acad. Sci. USSR

Submitted : April 12, 1954



3

Influence of secondary γ rays in the determination of the activity of radioactive substances by γ rays (G. V. Gorshkov). *Trav. Inst. Etat radium* (U. S. S. R.) 3, 37-55 (in English 55-9) (1937). The radioactivity of rocks in situ, or in ore piles or sheets, is detd. quickly and conveniently by γ-rays. In order to explain the frequent discrepancies between this method and exact lab. detns. it was decided to study the effect of secondary γ-rays on field measurements of radioactivity. The expil. results show that in detg. the d. of a pencil of γ-rays from a radioactive prepn. inclosed in a protective capsule it is necessary to take into account the influence of the secondary γ-rays.

John Ivnik

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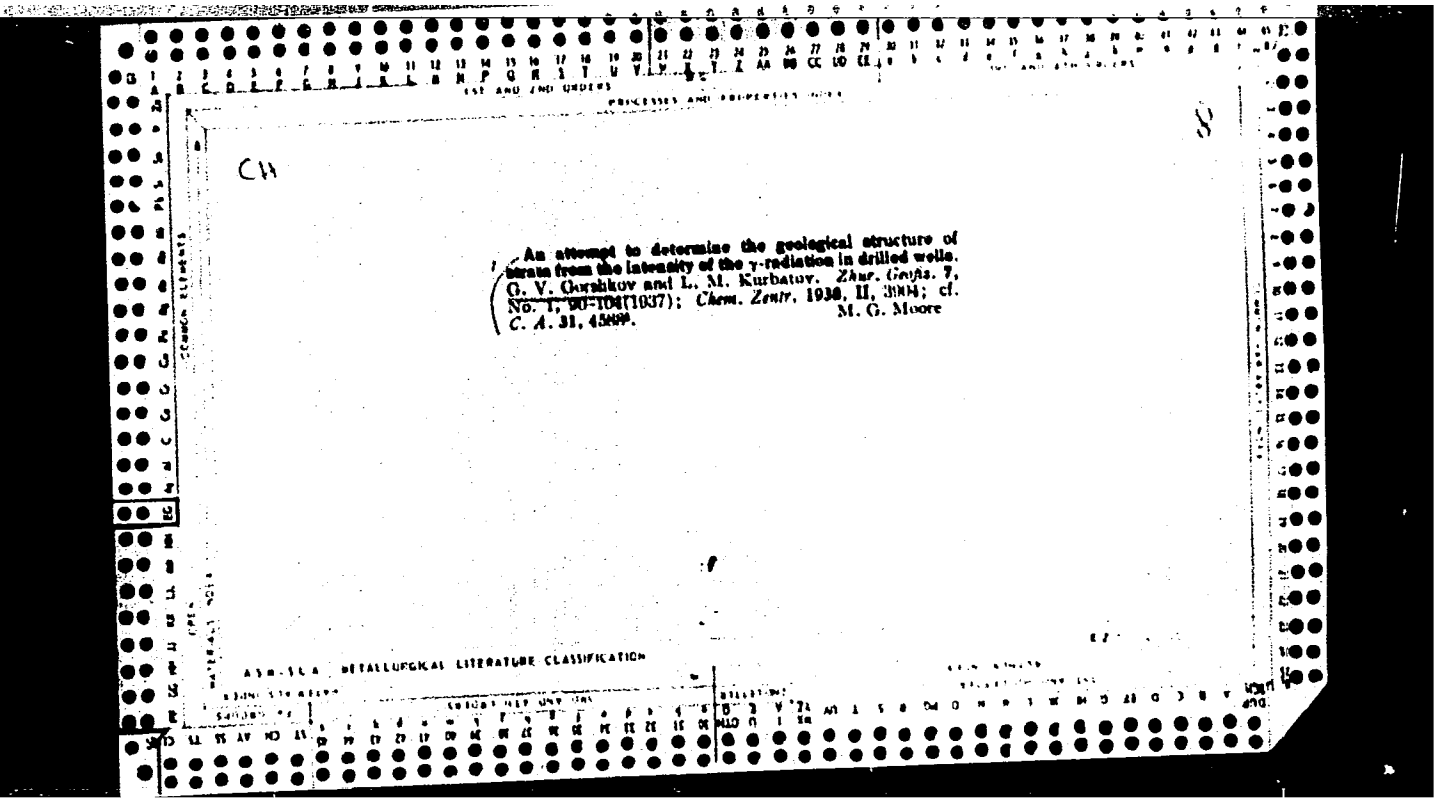

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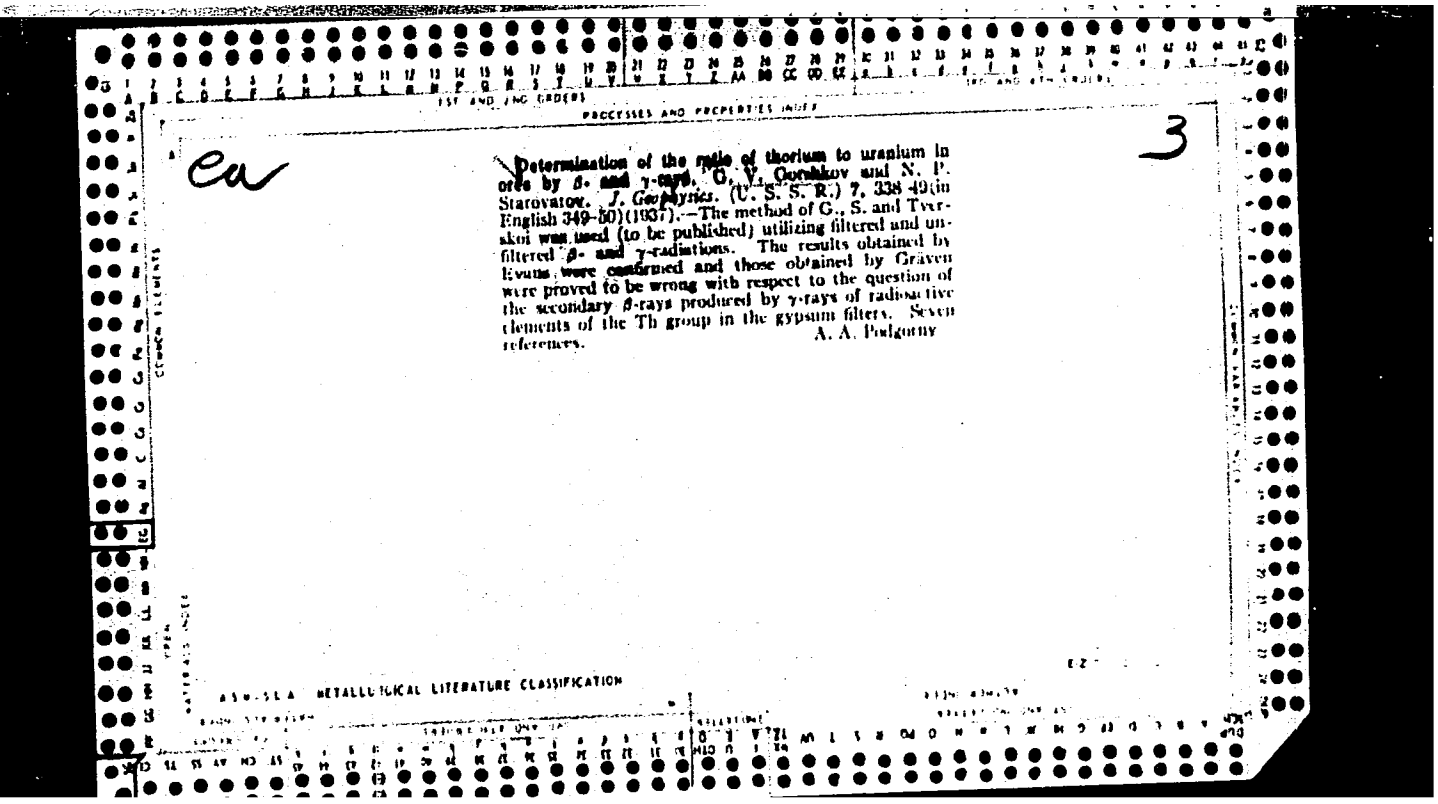

Ca

3

Determination of the ratio of thorium to uranium in ores by β- and γ-rays. G. V. Gorshkov and N. P. Starovatov. *J. Geophysics.* (U. S. S. R.) 7, 338-49(in English 349-50)(1937).—The method of G. S. and Tverskoi was used (to be published) utilizing filtered and unfiltered β- and γ-radiations. The results obtained by Evans were confirmed and those obtained by Gráven were proved to be wrong with respect to the question of the secondary β-rays produced by γ-rays of radioactive elements of the Th group in the gypsum filters. Seven references. A. A. Pulgotny

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